

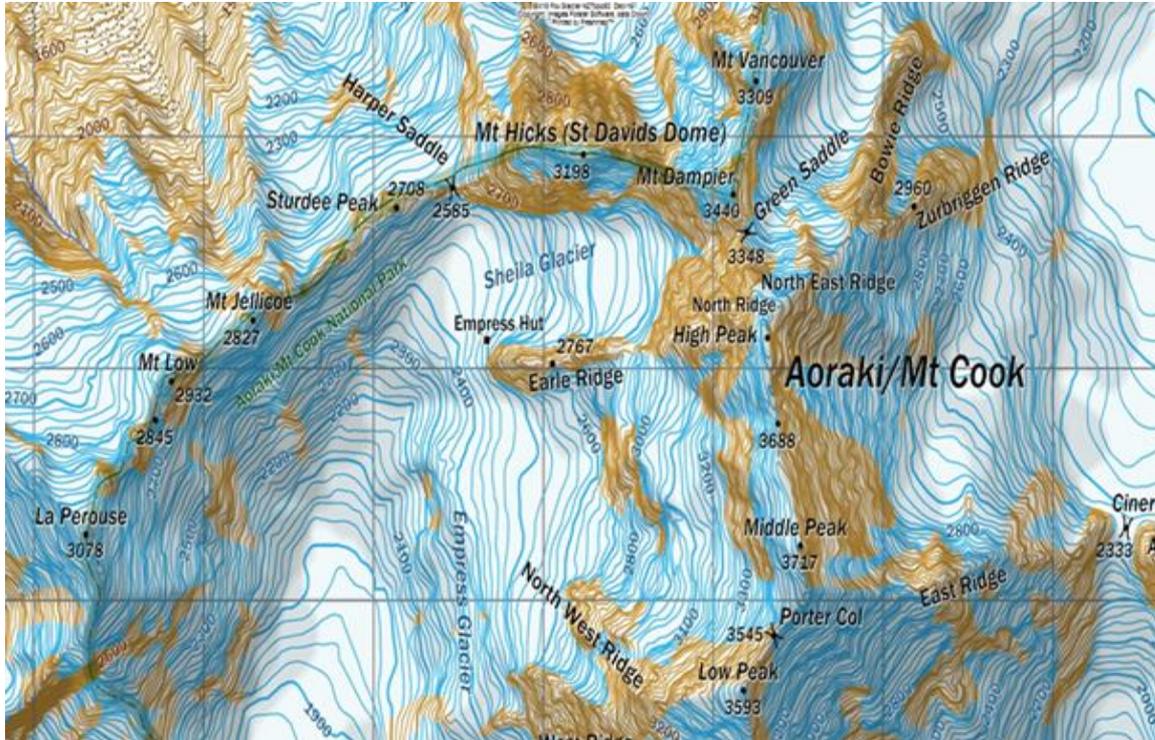
**Search and Rescue Operation Review**  
***OPERATION MORGAN***

**Location:** Harper Saddle, Mt Hicks,  
Aoraki / Mt Cook National Park  
New Zealand

**Date:** Wednesday 31 October 2018

**Report version:** Final

**Reviewer:** Mike Wright **MNZM**  
on behalf of  
NZSAR Secretariat



(Source: 1:50,000 Fresh Map)

### **Acknowledgement of Support:**

I would like to acknowledge the support and valued input from Mrs Joanne Morgan, Dr Garth Morgan, members of the Rescue Coordination Centre New Zealand, New Zealand Police, Department of Conservation Aoraki / Mt Cook, Aoraki / Mt Cook Alpine Rescue Team, the local Aviation community and St John Ambulance Responders.

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## 1. Executive Summary:

The Rescue Coordination Centre New Zealand (RCCNZ) is responsible for all Category II, Search and Rescue Incidents. A Category II incident includes land-based missions arising from someone activating a distress beacon.

At 0541hrs on Wednesday 31 October 2018, RCCNZ received a Personal Locator Beacon (PLB) alert and immediately instigated beacon alert procedures.

The location of the alert was quickly identified as coming from the Harper Saddle area on Mt Hicks, Aoraki / Mt Cook National Park, New Zealand.

Department of Conservation (DOC) Aoraki / Mt Cook Alpine staff were notified, an Incident Management Team populated and the Aoraki / Mt Cook Alpine Rescue Team mobilised.

Approximately 108 minutes from being mobilised the Alpine Rescue Team was onsite, located one victim and had extraction and First Aid procedures underway. Three minutes later the second victim had been located with extraction and First Aid procedures underway.

All members of the climbing party had been recovered to the Aoraki / Mt Cook Village by 0824hrs.

Efforts continued at the EOC Emergency Medical Room, to resuscitate the two completely buried victims by Alpine Rescue Team members, St John Ambulance Responders and attending paramedics from the Garden City Rescue Helicopter. Regrettably those efforts were unsuccessful.

The New Zealand Search and Rescue Secretariat has commissioned a Review with the purpose of making recommendations as appropriate to the New Zealand Search and Rescue Council relevant to improving New Zealand's SAR system, its people, equipment, documentation, skills, processes and procedures.

## 2. Recommendations:

1. RCCNZ SARO's provide a contact name and phone number to ensure people they have contacted are able to return their calls.
2. NZ Police ensure any upgrades or disruptions to the usual service provided is communicated to Emergency Response partner agencies, including RCCNZ.
3. RCCNZ insert an early prompt in the Beacon Response SOP, to alert Police to a PLB activation.
4. Staff at the NZ Police Communications Centres are familiar with the difference between a "Spot" type alert and a PLB alert.
5. The Avalanche Pager is only activated after the Incident Management Team of the controlling authority, of a particular event, has given that authorisation.
6. NZ Police consider inserting a paragraph in the Mackenzie Winter Response Group Avalanche Call-Out Procedure, alerting the reader to expectations should RCCNZ be involved in the SAROP as a result of a beacon activation.
7. A workshop is convened of Alpine Activity practitioners, Avalanche Forecasters and Emergency Service Representatives, with the aim of identifying enhancements to the Avalanche Advisory Regime and Avalanche Awareness in the New Zealand Alpine environment.
8. NZSAR consider reviewing and refreshing the New Zealand Avalanche Search and Rescue Guidelines, dated 8 September 2014. It would be useful if RCCNZ were included as a participant in this exercise.
9. Consideration is given, to the RCCNZ Team involved in this SAOP receiving formal recognition, by their organisation, for the manner in which they instigated Op Morgan, remaining focussed throughout, despite some contrary information, thereby allowing the operation to run uninterrupted.
10. Consideration is given, to the members of the Department of Conservation Aoraki /Mt Cook Incident Management Team, Aoraki / Mt Cook Alpine Rescue Team, St John Ambulance responders and members of the responding aviation organisations receiving formal recognition for their contribution to Op Morgan.

### 3. Introduction:

In the early hours of Wednesday 31 October 2018, three mountaineers, Joanne Morgan, Wolfgang Maier and Martin Hess were attempting to climb Mt Hicks (3198m), Aoraki / Mt Cook National Park, New Zealand.

The party stopped at Harper Saddle for a brief rest. Just prior to resuming their climb, at 0523hrs<sup>1</sup>, Morgan has sent a "Spot" message to her husband. The preformatted message gave the latitude / longitude of their position and stated all was ok.

Shortly after resuming their climb an avalanche has engulfed the party, sweeping them over a small ice cliff and back down the slope, stopping close to the point where they had earlier taken a break.

All three climbers have been completely buried with the exception of Morgan who had her face clear of snow. Morgan was able to partially extract herself, access and activate her personal locator beacon (PLB).

The alert was received at the Rescue Coordination Centre New Zealand (RCCNZ) at 0541hrs<sup>2</sup>. The RCCNZ is responsible for all Category II Search and Rescue Incidents. A Category II incident includes land-based missions arising from someone activating a distress beacon.

The duty Search and Rescue Officer (SARO) immediately instigated procedures to identify the location of the alert and mount an effective rescue.

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<sup>1</sup> Dr Garth Morgan's cell phone

<sup>2</sup> RCCNZ Operation Log

#### 4. Background:

Some days prior to the avalanche Mrs Joanne Morgan, along with two climbing companions Wolfgang Maier and Martin Hess, embarked on an expedition to climb Mt Hicks, 3198m, Aoraki / Mt Cook National Park.

Mrs Morgan a keen mountaineer had a goal of achieving the 3000m Peak Challenge. (To climb all 24 peaks higher than 3000m in New Zealand). At the time of the incident, the ascent of Mt Hicks was the 23rd peak of that challenge. Wolfgang Maier had accompanied Mrs Morgan on the 22 previous climbs.

Wolfgang Maier and Martin Hess were professional Mountain Guides, however at the time of the incident were climbing in the capacity of companions.

Leaving Mt Cook Village, the party has made an arduous climb up the Hooker Glacier to the Empress Hut. Upon reaching the Empress Hut, weather conditions delayed an immediate attempt on Mt Hicks by some 2 days.

On the evening of Tuesday 30<sup>th</sup> October 2018, it was considered a break in the weather would allow sufficient time to successfully climb Mt Hicks. Whilst the Avalanche Advisory was unfavourable (3 Considerable Risk), the onsite assessment differed.

The party left the Empress Hut at 0200hrs, traversed the Sheila Glacier, climbed up the Harper Saddle and stopped for a brief rest. During this time Mrs Morgan sent a "Spot" notification to her husband Dr Garth Morgan.

The "Spot" notification was received at 0523hrs, stating all was well. This was a preformatted message. Shortly after dispatching the message the climbing party continued, leaving a climbing pole as a point of reference and as a belay point for the return journey.

All three members were roped together, Maier in the lead followed some distance back by Hess and then Morgan.

Shortly after continuing their climb an avalanche was triggered, enveloping the 3 climbers, sweeping them over a small ice cliff and back down the slope to near where they had previously stopped.

Once the avalanche stopped Mrs Morgan found herself buried in snow but with her face uncovered. Mrs Morgan was able to extract herself enough to activate her Personal Locator Beacon (PLB) at (0541hrs) and then continue to extract herself fully.

On extracting herself, Mrs Morgan's calls to her companions. These calls have gone unanswered. At 0626hrs Mrs Morgan answered a call from the RCCNZ and was able to advise them of the circumstances.

**5. Response:**

Scene:

Mt Hicks – Harper Saddle – Aoraki / Mt Cook National Park

Altitude 2650 metres, 37-degree slope

Storm Slab Avalanche

Approx. 70 meters in length and width.<sup>3</sup>



Photos supplied by A. Tindall – Supervisor / Senior Team Leader, DOC Aoraki /Mt Cook Alpine Rescue Team.

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<sup>3</sup> Aoraki/Mt Cook Alpine Rescue Team, Report on the Rescue Response for Wolfgang Maier & Martin Hess Fatalities 31 October 2018.

Initial Action on Receipt of Beacon alert:

0541hrs. RCCNZ receive the first of a series of beacon alerts. The Duty SARO sets about establishing the location of the alert and who the beacon is registered too.

0548hrs. RCCNZ calls the registered owner of the PLB Mrs Joanne Morgan and leaves voicemail message.

0553hrs. RCCNZ ring the alternative contact for the PLB, Mr Garth Morgan. Mr Morgan advises he had spoken with his wife the previous evening. They were at the Empress Hut and were going to try an attempt on Mt Hicks that morning.

0605hrs. RCCNZ advise the Duty Officer at the Department of Conservation (DOC) Aoraki / Mt Cook National Park of the PLB activation. The Duty Officer is aware of who the party is because they had filled out the Intentions Book.

0615hrs. RCCNZ have another conversation with the DOC Duty Officer. He advises he is going to the Emergency Operating Centre (EOC), activating the Incident Management Team (IMT) and the Alpine Rescue Team.

0618:44hrs. RCCNZ advise NZ Police (NZP) of a PLB activation and details known at that time.

0628hrs. RCCNZ again call Mrs Morgan, she answers and alerts RCCNZ to the climbing party's predicament. RCCNZ immediately passes this information to the DOC IMT.

0737hrs. On arrival of helicopter 1<sup>st</sup> Alpine Rescue Team departs base.

0744hrs. After Site Safety Assessment Helicopter lands on site.

0752hrs. Helicopter leaves site with Mrs Morgan.

0753hrs. 1<sup>st</sup> Victim located. Extraction and First Aid underway.

0756hrs. 2<sup>nd</sup> Victim located. Extraction and First Aid underway.

0756hrs. Mrs Morgan returns to EOC landing zone (LZ)

0817hrs. Maier returned to EOC Emergency Medical Room.

0824hrs. Hess returned to EOC Emergency Medical Room

CPR was applied to both victims, by Alpine Rescue Team members, as soon as practically possible onsite and continued during the return flight. On their return to the Emergency Medical Room, CPR continued with the assistance of the attending local St John Ambulance members and the attending Advanced Paramedics.

The Rescue concluded when the attending Advanced Paramedics deemed "Life Extinct".

## 6. Evaluation Methodology:

*The agreed outcome of the Review activity:*

Make recommendations as appropriate to the New Zealand Search and Rescue Council relevant to improving New Zealand's SAR system, its people, equipment, documentation, skills, processes and procedures.

Develop a 20 – 30-minute case study presentation of the SAROP and recommendations.

*Review Scope:*

1. To gain and understanding of the sequence, times of events and key decisions relating to the Search and Rescue (SAROP) of Jo Morgan from Mt Hicks after an avalanche on 31 October 2018.
2. Ascertain the appropriateness for an operation of this nature of the search and rescue arrangements, capabilities, documentation and procedures utilised for this SAR OP, its Incident Management Team (IMT) and SAR Teams. Identify areas of excellence, sufficiency, lack, relevance, appropriateness and those that may need improvement.
3. Review and consider the appropriateness and/or utility of the following specific aspects of the SAR Op with a view to confirming, improving and/or refining SAR documentation, systems, processes, skills, equipment and technology:
  - a. The IMT tools and arrangements, including search tools, planning, investigation, intelligence, information flow and information analysis used and applied during this SAROP
  - b. The positions and sizes of areas to be searched and the capabilities, teams, skills, and equipment applied to those search areas, given the information available at that time.
  - c. The ability to scale, resource and support the operation with appropriately trained personnel throughout the SAROP.
  - d. Search conclusion and transition to the recovery phase (exclude the conduct of the recovery phase itself)
  - e. Family and Iwi liaison and support arrangements.
  - f. The management of family and other spontaneous search volunteers.
  - g. The SAR capabilities, skills and equipment of SAR personnel involved.
  - h. Media relations.
  - i. The effectiveness and utility of the Canterbury Avalanche Plan.

- j. The use and accuracy of the Avalanche Advisory, both for the subject and the SAR Teams.
- k. Identify any skill, equipment, technology, document, process or procedure that may contribute to a significant information and/or performance improvement for this SAROP or a SAROP of this nature.

*The process followed in preparing and submitting the report.*

Speak with:

Survivor – Mrs Morgan and Dr Garth Morgan  
Staff of Rescue Coordination Centre New Zealand (RCCNZ)  
Staff of New Zealand Police (NZP)  
Members of the Department of Conservation (DOC) Incident Management Team  
Members of the DOC Aoraki / Mt Cook Alpine Rescue Team.  
Avalanche Forecaster & Avalanche Dog Handler– Dave McKinley

Other activity included;

Query Beacon Activation SOP's,  
Avalanche Advisory regime, and  
Avalanche Response Plans  
View Avalanche Awareness Education material

## 7. Findings:

Review and consider the appropriateness and/or utility of the following specific aspects of the SAR Op with a view to confirming, improving and/or refining SAR documentation, systems, processes, skills, equipment and technology:

*The IMT tools and arrangements, including search tools, planning, investigation, intelligence, information flow and information analysis used and applied during this SAROP*

- The Department of Conservation has a room set aside and maintained as an EOC. It is adjacent to the Alpine Rescue Team Equipment Room and the Medical Emergency Room. The helicopter LZ is also proximate.
- The EOC is well laid out and organised.
- The Department of Conservation Incident Management Team, Aoraki / Mt Cook, is staffed by seasoned veterans of the alpine environment. They are well familiar with the functioning of an efficient and effective Incident Management Team.
- This was well evidenced on the day with sound briefings given to the Alpine Rescue Team, recognising what resources were required and in what order. Members of the team also displayed the ability to remain focussed and not become distracted by misinformation.
- By virtue of their isolation members of the IMT have dual roles within Emergency Response organisation. During this operation, once the victims were transiting back to the EOC, the IMT Ops Manager vacated his position and moved to his role within St Johns Ambulance. The Ops Manager's role was filled by another senior DOC member without any noticeable loss of continuity. This resilience of the IMT was further demonstrated when a senior member, rightfully distanced himself from being involved in the IMT, due to his close association with one of the victims.
- The Planning / Intell cell of the IMT, benefitted hugely from the "Intentions Log" regime which exists at the DOC Aoraki / Mt Cook Visitors Centre. Crucial information was obtained very quickly.

*The positions and sizes of areas to be searched and the capabilities, teams, skills, and equipment applied to those search areas, given the information available at that time.*

- The onsite activities of this SAROP occurred at an altitude of 3198m, just above Harper Saddle, on the Curtain Route up Mt Hicks, Aoraki / Mt Cook National Park.

- One member of the Alpine Rescue Team described being “underwhelmed” in terms of the size of the avalanche when he first sighted it.
- The Aoraki /Mt Cook Alpine Rescue Team has strong leadership. It is staffed by professional, highly qualified, well trained, experienced mountaineers.
- On the day, their performance was exemplary throughout.

*The ability to scale, resource and support the operation with appropriately trained personnel throughout the SAROP*

- The RCCNZ “Watch” which responded to the initial alert was adequately staffed, there was a full complement of staff on the following “Watch”.
- The DOC callout system for the Duty Officer, IMT members and the DOC Aoraki / Mt Cook Alpine Rescue Team functioned efficiently and effectively.
- If the avalanche had been of greater magnitude, additional responders would have been activated, comprising of Mountain Guides and Ski Patrollers living in the Aoraki / Mt Cook Village, personnel in Wanaka and volunteers at Fox and Wakatipu.
- The attempted resuscitation of the victims was resource intense, onsite and en-route back to the EOC, it was adequately managed by members of the Alpine Rescue Team. On arrival at the EOC efforts intensified with local St John Ambulance responders and Advanced Paramedics from the responding Christchurch Garden City Rescue Helicopter assisting.

*Search Conclusion and transition to the recovery phase (exclude the conduct of the recovery phase itself).*

- This SAROP was treated as a Rescue for the duration. It concluded when the two victims were officially pronounced “Life Extinct”.

*Family and Iwi liaison and support arrangements.*

- A high level of victim support was extended to Mrs Morgan on her return to the Search Base, at Mt Cook Village. By virtue of the PLB Activation Mrs Morgan’s family were promptly contacted.
- The NOK of the two deceased victims were notified in accordance with Police Practice, regrettably Social Media had alerted NOK of one family whilst another’s NOK were in transit to home in Hawaii following a visit to NZ.
- Due to the dynamic nature of the SAROP Iwi were not consulted or involved.

*The management of family and other spontaneous search volunteers.*

- Due to the isolation of Aoraki / Mt Cook Village and associated difficulties in getting there, together with the relatively short duration of the rescue, no family presented at the EOC.
- The activation of the Avalanche Pager by Police, whilst with the best of intentions, was done with out consultation with the DOC IMT at Aoraki / Mt Cook or RCCNZ.
- Additional resources were not required at that time. The “page” generated a number of phone calls which caused significant disruption to the IMT and Alpine Rescue Team members already engaged in responding.

*The SAR capabilities, skills and equipment of SAR personnel involved.*

- The lead RCCNZ SARO has 16 years in the role.
- The Aoraki Mt Cook, Alpine Rescue Team members have a high level of experience, are competent and professional.
- The Alpine Team Rescue members had just completed a three-week period of intensive pre-season Alpine Search and Rescue training.
- The composition of the 1<sup>st</sup> Response Team had an exceptional level of qualification, experience and skill.
- On the day in question were described as “slick, cool, calm and collected, asking all the right questions”

*Media relations.*

- There was significant Media interest in the event. Due to the isolation of Aoraki / Mt Cook Village any media representatives that did attend were easily managed.
- The New Zealand Police, Mid-South Canterbury Area Commander spoke with empathy and authority on the facts as he knew them.

*The effectiveness and utility of the Canterbury Avalanche Plan*

- The Canterbury Avalanche Plan has no relevance to this operation.
- The relevant document for the AO of this SAROP, is the Mackenzie Winter Response Group – 2018 Avalanche Call out Procedure.

- This is a good comprehensive document; however, it is a Police document addressing the procedures to be followed should Police be running the SAROP – it is silent on expectations should RCCNZ be running the SAROP as a result of a Beacon activation.

*The use and accuracy of the Avalanche Advisory, both for the subject and the SAR Teams.*

*Use-*

- The Avalanche Advisory Document is described as good and informative.
- It is easily accessible on the Internet. In addition, the Mountain Safety Council website provides a plethora of advice on Avalanches and Safety in the alpine environment.
- A current copy, of the Advisory, is on the counter at the Department of Conservation Aoraki / Mt Cook Village Visitor Centre.
- The Avalanche Advisory is included in the DOC evening broadcast.
- It is and was, consulted pre-deployment by the Alpine Rescue Team.

*Accuracy-*

- The Avalanche Advisory for the period in question was issued on Tuesday 30<sup>th</sup> October 2018 at 1023hrs and was valid until Thursday 1<sup>st</sup> November 2018 1023hrs.
- The High Alpine (Above 1800 meters) was rated as 3 Considerable Risk (Dangerous avalanche conditions. Careful snowpack evaluation, cautious route-finding and conservative decision-making essential)
- There were no dissenting views on the accuracy of the Avalanche Advisory.

*Other –*

- A view was expressed that more resources could be applied to Avalanche forecasting and that the Forecasting Season be extended.
- NZSAR – New Zealand Avalanche Search and Rescue – Readiness Guidelines, dated 8 September 2014, exist on the Internet.

*Identify any skill, equipment, technology, document, process or procedure that may contribute to a significant information and/or performance improvement for this SAROP or a SAROP of this nature.*

*Process or Procedure*

- Overnight 30 / 31 October 2018, Police Communication Centres were undergoing a major upgrade on the Computer Assisted Resource Deployment System (CARD).
- All Communication Centres were using back-up systems. The virtual queue process was not available during the upgrade. Calls were being diverted to the Communication Centre nearest to where the call originated, the information then entered into an email template which was then emailed to an email address for the Communication Centre that would be responsible for dispatching / managing the event. The email address in each Centre was monitored by someone responsible for triaging the events into Dispatch Channel and Order of priority and then hand delivering the event to the Dispatcher.
- The obvious downside of the back-up process is that information entered into events is not immediately visible to Dispatchers or Supervisors. They had to wait for the information to go through the email and triage process.
- The avalanche at Mt Hicks came to the Police attention firstly via Dr Morgan, wishing to update authorities on the “Spot Alert” he had received earlier from his wife, stating that all was ok. This alert was timed earlier than the PLB activation.
- This phone call was received at the Central Communication Centre (06:03:53hrs) because Dr Morgan was calling from Wellington.
- The Southern Communications Centre received the above information at 06:18hrs.
- At 06:18:44hrs Police (Southern Communication Centre) have received a call from RCCNZ alerting them to the situation.
- To compound matters at 06:23:12hrs, an NZP member who has misinterpreted the messages contacted RCCNZ and advised them he believes it was a mistake. They are all ok and everything is alright.

- The lack of the usual Virtual Queue, delay in emails being received and misinterpretation of information added considerably to the intensity of the NZP Communication Centres and RCCNZ operational environments.
- Despite the above, the rescue of the avalanche victims was not compromised in any way.
- To the credit of the RCCNZ SARO's, they remained focussed throughout. A phone call to Mrs Morgan at 06:26hrs verified the situation.
- The RCCNZ had no prior knowledge of the NZP Communication Centres CARD upgrade or potential problems that may arise as a consequence.
- The notification of Police by RCCNZ, of a Beacon alert, whilst described as an "engrained process", has never been formalised in the Beacon Alert Standard Operating Procedure (SOP).

## 8. Conclusions:

The SAROP – Operation Morgan was the responsibility of RCCNZ by virtue of the RCCNZ activation at 0541hrs, immediately identifying the SAROP as a Category II.

The SARO's responded swiftly and professionally to the PLB activation, quickly establishing the location and likely validity of the activation by 0548hrs. By reason of the no response and a second phone call at 0553hrs, NOK to the registered owner of the PLB were alerted.

The DOC Duty officer was advised in a timely manner at 0605hrs. IMT and Alpine Rescue Team callout procedures then followed.

The first Alpine Rescue Team was kitted up and waiting for the arrival of the first helicopter which departed the EOC at 0737hrs for the avalanche site, arriving at 0744hrs.

Mrs Morgan was lifted from the site at 0752hrs.

By 0753hrs Martin Hess had been located, with extraction and First Aid procedures underway.

By 0756hrs Wolfgang Maier had been located with extraction and First Aid procedures underway.

By 0824hrs all victims involved in the avalanche had been returned to Aoraki /Mt Cook Village.

The NZP CARD upgrade caused delays in messages reaching RCCNZ, this, combined with the misinterpretation of a message created some confusion for the Police Communication Centre and RCCNZ staff.

Due to an absolute focus by the RCCNZ SARO's, on continuing with the response until categorically proving the PLB alert was false, there was no disruption to the SAROP Responders.

Requests for additional resources by the IMT were facilitated swiftly and without question by RCCNZ staff, enhancing the professionalism, efficiency and effectiveness of the SAR Response.

There were no dissenting views on the accuracy of the Avalanche Advisory on the day in question.

## Appendix One

### Terms of Reference

1. To gain an understanding of the sequence, times of events and key decisions relating to the Search and Rescue Operation (SAROP) of Jo Morgan from Mt Hicks after an avalanche on 31 October 2018
2. Ascertain the appropriateness for an operation of this nature of the search and rescue arrangements, capabilities, documentation and procedures utilised for this SAROP, its Incident Management Team (IMT) and SAR teams. Identify areas of excellence, sufficiency, lack, relevance, appropriateness and those that may need improvement.
3. Review and consider the appropriateness and/or utility of the following specific aspects of the SAROP with a view to confirming, improving and/or refining SAR documentation, systems, processes, skills, equipment and technology:
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  - b. The positions and sizes of areas to be searched and the capabilities, teams, skills, and equipment applied to those search areas, given the information available at the time.
  - c. The ability to scale, resource and support the operation with appropriately trained personnel throughout the SAROP.
  - d. Search conclusions and transition to the recovery phase (exclude the conduct of the recovery phase itself).
  - e. Family and Iwi liaison and support arrangements.
  - f. The management of family and other spontaneous search volunteers.
  - g. The SAR capabilities, skills and equipment of SAR personnel involved.
  - h. Media relations
  - i. The effectiveness and utility of the Canterbury Avalanche Plan.
  - j. The use and accuracy of the Avalanche Advisory both for the subject and the SAR teams.
4. Identify any skill, equipment, technology, document, process or procedure that may contribute to a significant information and/or performance improvement for this SAROP or a SAROP of this nature.
5. Make recommendations as appropriate to the New Zealand Search and Rescue Council relevant to improving New Zealand's SAR system, its people, equipment, documentation, skills, processes and procedures.
6. Develop a 20 – 30-minute case study presentation of the SAROP and your recommendations

Appendix Two - RCCNZ Operational Log (Redacted)  
Appendix Three - Avalanche Advisory  
(Aoraki/Mt Cook Alpine Rescue Team Report)



## Aoraki/Mt Cook

### 3 Considerable Risk

Rapidly changing volatile spring conditions, a high degree of caution advised.

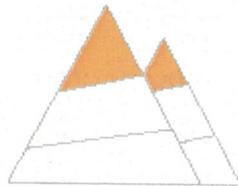
Issued Tuesday 30th October 2018, 10:23

Valid until Thursday 1st November 2018, 10:23



### High Alpine

Above 1800 meters



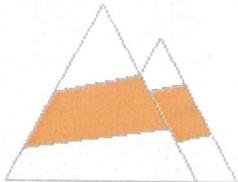
### 3 Considerable Risk

Dangerous avalanche conditions. Careful snowpack evaluation, cautious route-finding and conservative decision-making essential.



### Alpine

1800 - 1400 meters



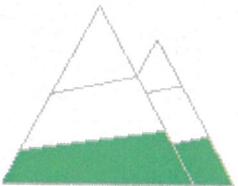
### 3 Considerable Risk

Dangerous avalanche conditions. Careful snowpack evaluation, cautious route-finding and conservative decision-making essential.



### Sub Alpine

Below 1400 meters



### 1 Low Risk

Generally safe avalanche conditions. Watch for unstable snow on isolated terrain features.

#### Avalanche danger scale:

